A new species of *Alloxysta* hyperparasitic on aphids associated with South American *Nothofagus* forests

(Hymenoptera: Cynipidae)

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The following description is done as part of an effort to catalog arthropods associated with species of *Nothofagus* (Fagaceae). The material was collected by E. I. Schlinger in 1966 and 1967 while surveying for insects on *Nothofagus* in the southernmost areas of Chile and Argentina. The aphids *Neuquenaphis edwardsi* Laing and *N. schlingeri* Ris-Lambers were collected by beating, and held until mummies were noticed. The mummies were individually isolated. Several hundred aphids were parasitized by a species of *Pseudephedrus* (Hymenoptera: Aphidiidae); six of these aphids were hyperparasitized by a single, previously undescribed *Alloxysta* species.

The presence of a primary and secondary parasite complex on *Neuquenaphis* on *Nothofagus* was previously unknown. This was in part due to lack of collecting and in part due to the low density and high dispersion of the hosts. No other hyperparasites, either cynipid or chalcidoid, were reared, although a single specimen of an undescribed species in the charipine cynipid genus *Phaenoglyphis* was collected on *Nothofagus* foliage.

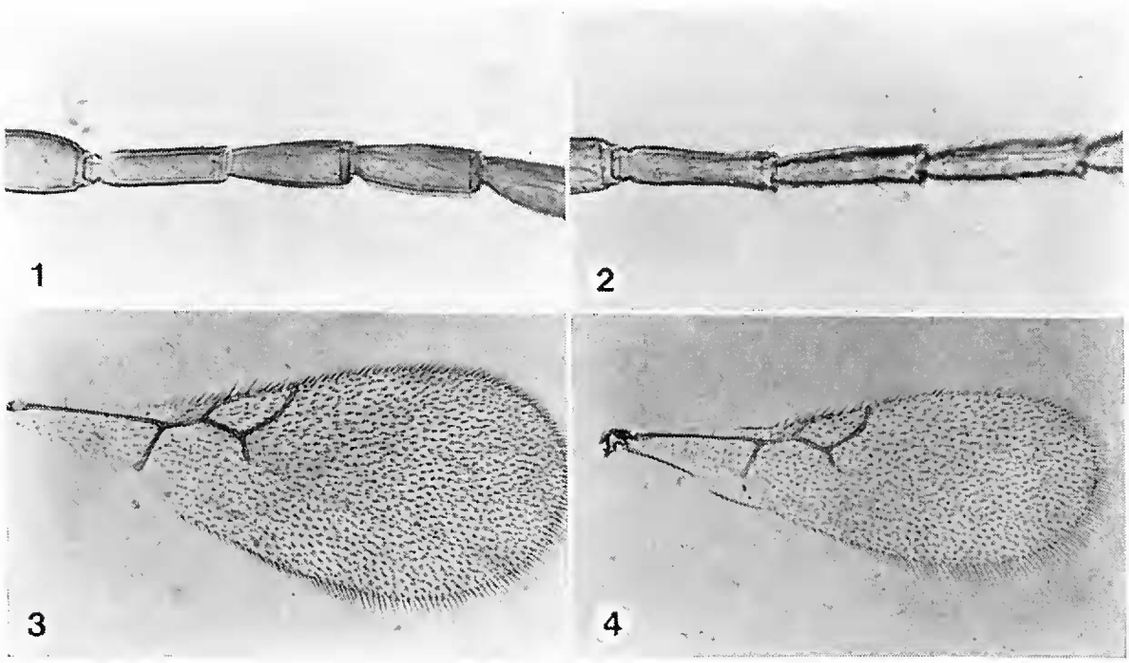
The high dispersion of the aphid host suggests that this new *Alloxysta* has great host-finding capabilities.

This species of *Alloxysta* is immediately distinguishable from all other New World Alloxystinae by its bicolorous state. The equal length of the third, fourth and fifth antennal segments in both male and female and the lack of curvature in any of the male segments is also diagnostic.

Alloxysta nothofagi, n. sp.

Adult female.—Head above antennal insertion pale reddish-brown; frons, genae, mouthparts and antennae straw yellow. Pleural area including pronotum straw yellow. Mesonotum and abdomen shiny castaneous brown. Entire leg and wing veins pale lemon yellow.

Head as wide as high; frons sparsely setose; genae, occiput and vertex glabrous. Antennae 13-segmented, filamentous, cylindrical; segments 1–3 smooth, 4–13 longitudinally ridged; segments 3–5 in ratio of 19:19:19 (19 = 0.1 mm) (Fig. 2); segments 6–13 slightly wider than 3–5. Pronotum behind occiput densely clothed with transparent decumbent setae. Mesoscutum moderately convex, longer than wide by ratio of 17:15, glabrous. Scutellum with long decumbent transparent setae



FIGS. 1–4. *Alloxysta nothofagi* Andrews. 1. Antennal segments 3–5, male. 2. Antennal segments 3–5, female. 3. Wing, female. 4. Wing, male.

on lateral posterior margins, glabrous above. Wings exceeding body as 88:57 (88 = 1.6 mm). Radial cell, elongate, 1.6 times longer than wide (Fig. 4). Ratio of radial cell length and width to wing width 2.6 and 7.0, respectively; r-1 straight; r-2 evenly arcuate.

Adult male.—As in female, except antennae 14-segmented, with 1–3 smooth, 4–14 longitudinally ridged, segments 3–5 without bow and in ratio of 16:16:15 (Fig. 1); radial cell 2.3 times longer than wide, ratio of radial cell length and width to wing width 2.5 and 6.1, respectively (Fig. 3).

Types.—Holotype male, 3.7 mi. S. Puerto Moreno, Rio Negro Prov., ARGENTINA, XI-17-1966, E. I. Schlinger (E66-11-17a) (*Nothofagus antarctica/Neuquenaphis edwardsi/Pseudephedrus* sp.). To be deposited in University of Chile, Santiago, Chile.

Paratypes.—2 males, same data as holotype. 1 female (E67-2-10g), 2 males (E67-2-10b), 18 km W. Angol, Malleco Prov. CHILE II-10-1967, E. I. Schlinger (*Nothofagus obliqua/Neuquenaphis schlingeri/Pseudephedrus* sp.). Three paratypes to be deposited in USNM and two to remain in author's collection.